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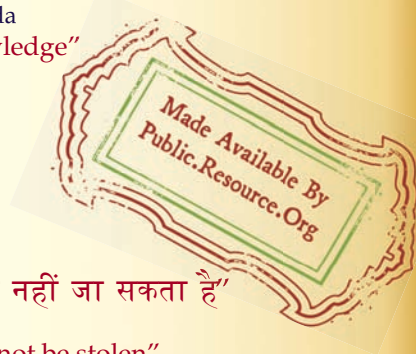
IS 1755 (1983): Method for wrapping test for metallic wire
[MTD 3: Mechanical Testing of Metals]



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“Knowledge is such a treasure which cannot be stolen”

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IS : 1755 – 1983
(Superseding IS : 4168 – 1967 and IS : 3388 - 1965)
(Reaffirmed 2006)

Indian Standard
**METHOD FOR
WRAPPING TEST FOR METALLIC WIRE**
(First Revision)

Second Reprint AUGUST 2007
(Including Amendment No. 1)

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

AMENDMENT NO. 1 JUNE 1997
TO
IS 1755 : 1983 METHOD FOR WRAPPING TEST FOR
METALLIC WIRE

(First Revision)

(Page 4, clause 1.1) — Substitute the following for the existing clause:

'1.1 This standard prescribes the method for conducting wrapping test of metallic wires.'

(MTD 3)

IS : 1755 - 1983

(Superseding IS : 4168-1967 and IS : 3384-1965)

Indian Standard

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Indian Standard
METHOD FOR
WRAPPING TEST FOR METALLIC WIRE
(*First Revision*)

0. FOREWORD

0.1 This Indian Standard (*First Revision*) was adopted by the Indian Standards Institution on 27 June 1983, after the draft finalized by the Methods of Physical Tests Sectional Committee had been approved by the Structural and Metals Division Council.

0.2 This Indian Standard was first published in 1961. Subsequently, it was decided by the concerned sectional committee to revise this standard so as to have a single reference in Indian Standard on method for wrapping test on metallic wire. So this standard, supersedes IS : 4168-1967* and IS : 3388-1965† as the requirements of these standards have been covered now in this standard.

0.3 In the preparation of this standard, assistance has been derived from the following standards published by the International Organization for Standardization:

ISO R 145-1960	Wrapping test for steel wire
ISO R 958-1969	Wrapping test for aluminium and aluminium alloy wire
ISO R 397-1964	Wrapping test for copper and copper alloy wire

0.4 Certain specific requirements have to be specified in the material specification where reference has been made to this standard. For convenience of reference, these requirements have been summarized and included in Appendix A.

0.5 In reporting the result of a test or analysis made in accordance with this standard, if the final value, observed or calculated, is to be rounded off, it shall be done in accordance with IS : 2-1960‡.

*Method for wrapping test of aluminium and aluminium alloy wire.

†Method of wrapping test for copper and copper alloy wire.

‡Rules for rounding off numerical values (*revised*).

IS : 1755 - 1983

1. SCOPE

1.1 This standard prescribes the method for conducting wrapping test of metallic wires circular in cross section, up to 6.0 mm.

2. PRINCIPLE OF TEST

2.1 The test consists of winding the wire a specified number of turns around a mandrel of the diameter stated in the materials specification. It may also include unwinding or unwinding and rewinding to a specified number of turns.

2.1.1 The test shall be carried out at ambient temperature, unless otherwise specified. The ambient temperature during test should be recorded.

3. TEST PIECE

3.1 The test piece shall be a piece of wire of sufficient length to enable the test to be made.

4. TESTING MACHINE

4.1 The testing machine used shall be so constructed that the wire may be wound in helix, tightly around the mandrel so that adjacent coils are in contact. A piece of wire to be tested may be used as the mandrel provided it is of the specified mandrel diameter.

5. TEST PROCEDURE

5.1 The test piece shall be wound round the mandrel at a constant speed, sufficiently slow to prevent any rise in temperature likely to affect the result of the test. To ensure tight winding a tensile stress not exceeding 5 percent of the nominal tensile strength of the wire may be applied during winding.

5.2 If unwinding or unwinding and rewinding are specified, the rate of unwinding or rewinding shall be sufficiently slow to prevent any rise in temperatures likely to affect the result of the test. At least one turn shall be left unwound.

6. TEST REQUIREMENTS

6.1 At the end of the test, the test piece shall be examined. The interpretation of the appearance of the tested portion shall be done in accordance with the material specification.

APPENDIX A

(Clause 0.4)

REQUIREMENTS TO BE SPECIFIED IN MATERIAL SPECIFICATION FOR WIRE AND WIRE PRODUCTS

A-1. In the material specification for wire and wire products where reference to this standard has been made, the following points shall be specified for wrapping test:

- a) The length of wire and the number of turns for winding or for winding and unwinding (*see 2.1 and 3.1*),
- b) The diameter of the mandrel round which the wire is to be wound (*see 2.1*),
- c) Speed of winding (*see 5.1*), and
- d) The interpretation of the visual appearance of the test pieces after the test (*see 6.1*).

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